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PENSOFT

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A new species and subspecies of the darkling beetle genus *Thraustocolus* Kraatz, 1866 from Oman (Coleoptera, Tenebrionidae)

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Abstract

A new species of darkling beetle *Thraustocolus* (*Prothraustocola*) *clypealis* **sp. nov.** with the new subspecies *T.* (*P.*) *clypealis minor* **ssp. nov.** are described from Oman and distinguished from other species of the genus. Images of important characters are provided for easier identification and discrimination of the new species.

Key Words

Coleoptera, Tenebrionidae, Pimeliinae, Tentyriini, *Thraustocolus*, Arabian Peninsula, taxonomy

Introduction

In the Palearctic darkling beetles are especially diverse in desert and semi-desert regions. Here, several genera such as *Pimelia* Fabricius, 1775 and other have diversified into a large number of species. The genus *Thraustocolus* Kraatz, 1866 shows comparably little diversity. Iwan, D., & Löbl, I. (Eds.) (2020) lists 12 species of the genus, one of which is from Oman: *Thraustocolus* (s. str.) *rugosus* Kaszab, 1979. Here, I provide the description of another species and subspecies of the genus from Oman.

All specimens of the newly described species were collected in Oman, located at the south-eastern end of the Arabian Peninsula. They were found in the northern part of the country between 23°N and 24°N and between 56°E and 59°E. The climate there is hot and dry all year round with maximum temperatures between 30 °C and 40 °C. In Dhofar in the south of Oman (with the capital Salalah, 17°N, 54°E), the new species has not yet been found despite of extensive search. The climate there is characterized by regular rainfall during the monsoon season from June to September.

Results

Thraustocolus (*Prothraustocola*) *clypealis* sp. nov.

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Fig. 1

Material examined. ***Holotype*** ♂: Oman, Al Heil, 12 km northwest of Al Hamra, 1960 m, 23°12'N, 57°12'E, 29.02.2020, leg. C. & G. Wagner. ***Paratypes*:** 1 specimen (sex unknown): Oman, Al Heil, 12 km northwest of Al Hamra, 1960 m, 23°12'N, 57°12'E, 23.10.2014, leg. C. & G. Wagner. – 2♂: Oman, Al Heil, 12 km northwest of Al Hamra, 1960 m, 23°12'N, 57°12'E, 19.03.2009, leg. C. & G. Wagner. – 1♀: Oman, 8 km northwest Sabikah, 23°10'N, 58°06'E, 06.03.2011, leg. C. & G. Wagner. – 2♀: Oman, Wadi Suwayh, 20 km south of Quriat, 23°05'N, 58°57'E, 08.03.2009, leg. C. & G. Wagner. – 1♂: Oman, Wadi Hatat, Al Amarat, 450 m, 23°22'55"N, 58°20'40"E, 13.12.2021, leg. J. C. Ringenbach. All type specimens listed above are currently kept by the author, later in Zoological Museum, Museum der Natur, Hamburg (ZMH). – 1♀: North Oman, Nizwa, Fira, 01.03.2003, leg. J.C. Ringenbach. – 1 specimen (sex unknown): Oman, Wadi Hatat,

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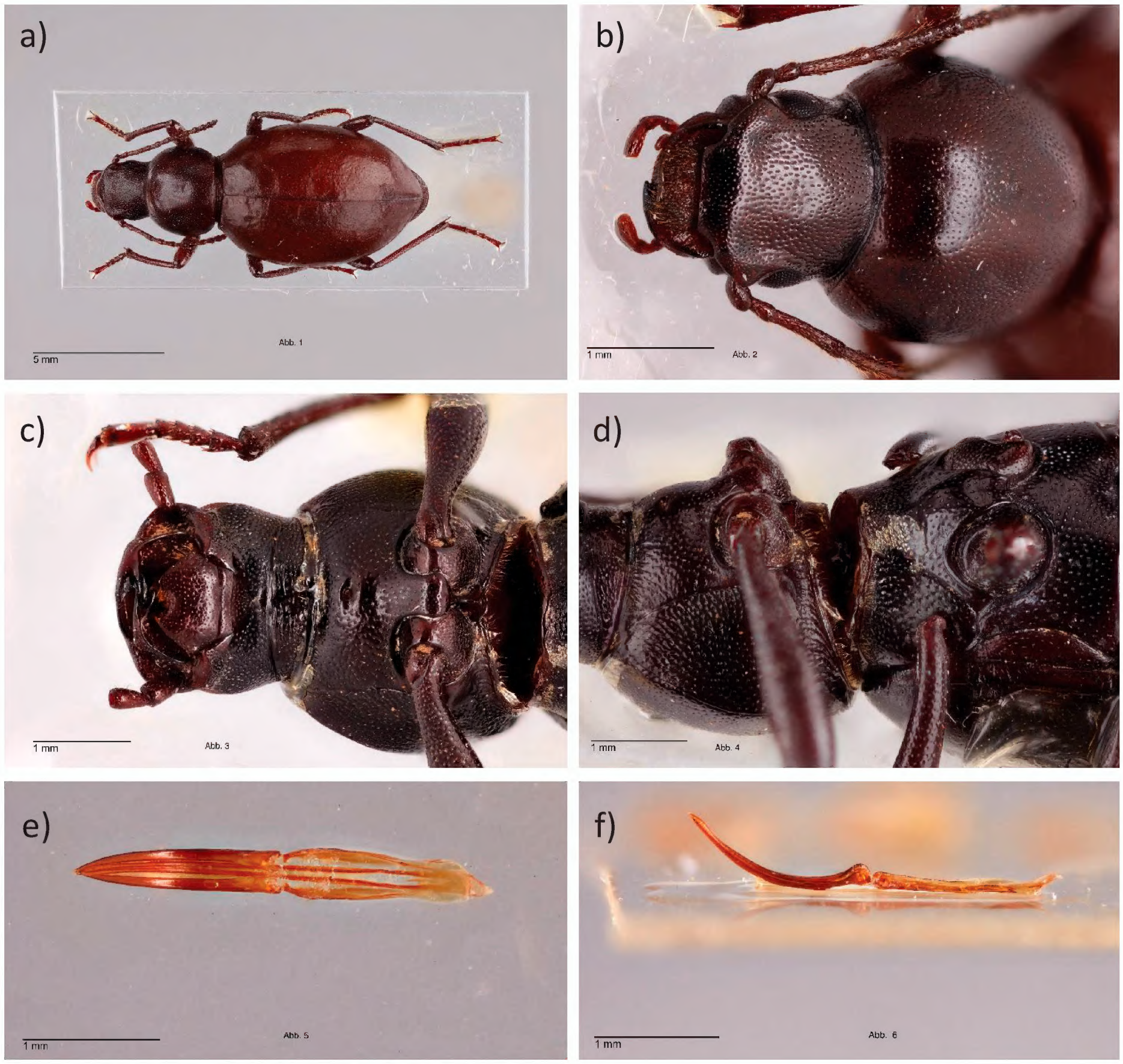

Figure 1. a. *Thraustcolus clypealis* sp. nov. dorsal view; **b.** *T. clypealis* sp. nov. head and pronotum dorsal view; **c.** *T. clypealis* sp. nov. head and pronotum ventral view; **d.** *T. clypealis* sp. nov. procoxae with prosternal apophysis; **e.** *T. clypealis* sp. nov. aedeagus; **f.** *T. clypealis* sp. nov. aedeagus lateral.

Al Amarat, 450 m, 23°22'55"N, 58°20'40"E, 13.12.2021, leg. J.C. Ringenbach, in Ringenbach Collection.

Description. ***Measurements. Length*:** ♂ 9–10 mm, ♀ 9–12 mm, width: ♂ 3–4 mm, ♀ 3.6–5 mm.

General coloration. Black to brown-black.

Head. Strongly punctured, strigose on the side of frons, shagreened spaces between the punctures on the anterior half, smooth on the back. Eyes large, flat, rounded, but in front more straight bounded by the genae. Head slightly longer than wide, greatest width at the border of the eyes and temples, transition from temples to eyes without angles, from eyes to genae with a reentrant angle of a good 90°. Between the genae and the anterior border of the clypeus a strong, characteristic lateral emargination, clypeus trapezoidal, anterior border truncated, often slightly concave. Frons with two lateral, strong impressions. Between the impressions, clypeus separated from the frons only by a slight bead and from there running downwards to the anterior margin. Keels present above the eyes (Fig. 1b).

Antennae. With a noticeably long 3rd segment, three times as long as the 2nd, the 4th half as long as the 3rd. From the 8th antennal segment to the 10th, becoming trapezoidally broader, the 11th shorter than the 10th. When directed backwards the antennae protrude beyond the base of the pronotum at about the 11th segment.

Pronotum. Very strong convex in length and width, shiny, lateral strong evenly rounded, slightly narrowing towards the base than towards the anterior border, thin margins all around, the right-angled anterior corners bent down, not visible in dorsal view. The posterior corners obtuse, and in contrast to the anterior corners, strongly rounded; pronotum dorsally roundly punctured all over, not confluent with shiny spaces of different sizes between one third and three times of a diameter of a puncture.

Elytra. Oval, less clearly punctured than the pronotum on a weak shagreened ground, often with fine transverse wrinkles. Basal margin present only on the shoulders (characteristic of the subgenus *Prothraustocola*).

Legs. Long; femora slender, tibiae thin, tarsi shorter than tibiae, the latter straight in females, in males especially the fore tibiae are more or less distinctly curved inwards. Metatarsomere 1 is longer than the next two tarsomeres together and is as long as metatarsomere 4.

Submentum. Starting from the base, widening straightly in the basal third, then narrowing straightly at a sharp, obtuse angle towards the anterior border. The anterior border with a strong round incision.

Gular sulcus not furrow-like, but consists of a pit in the middle that flattens out on the sides (characteristic of the subgenus *Prothraustocola*). Prosternum clearly punctured, male with a small deep rounded pit with a prominent bristle (Fig. 1c). Propleurae with lines of punctures, prosternal apophysis behind procoxae initially descending vertically, then briefly protruding horizontally sharp-edged in a roof-like manner (Fig. 1d). Mesosternum, metasternum and ventrites clearly punctured, spaces smooth.

Aedeagus. Slender, basal section almost as long as the apical, sides of the latter running parallel for about a quarter of its length, then uniformly very acute (Fig. 1e, f).

Etymology. The species is named after the peculiar formation of the clypeus.

Thraustocolus (*Prothraustocola*) *clypealis minor* ssp. nov.

https://zoobank.org/3F8D8A70-EF4C-4A61-84F5-863A6C8DE2D1

Fig. 2

Material examined. ***Holotype.*** ♂: Oman, Fossil Valley, 10 km southwest of Mahdah, 24°20'N, 55°54'E, 08.03.2016, leg. C. & G. Wagner, currently kept by the author, later in Zoological Museum, Museum der Natur, Hamburg (ZMH). ***Paratypes*:** 2♂: Oman, Fossil Valley, 10 km southwest of Mahdah, 24°20'N, 55°54'E, 08.03.2016, leg. C. & G. Wagner, currently kept by the author, later in Zoological Museum, Museum der Natur, Hamburg (ZMH).

Etymology. The subspecies is named after the Latin "minor", because it differs essentially from the forma typica in its smaller size.

Description. Similar to *Thraustocolus* (*Prothraustocola*) *clypealis* sp. nov., but noticeably smaller: length 6.6–7.6 mm, width 2.3–2.8 mm; sides of pronotum slightly less rounded, fore legs a little longer and more slender, brown-black.

Differential diagnosis. There are currently 6 species of the genus *Thraustocolus* known from the Arabian Peninsula and one from southern Iran which are differentiated below from the new species and its subspecies. For this delimitation numerous characteristics are used which the new species and subspecies have in common. Distinguishing the new species and its subspecies from the previously known species of *Thraustocolus* from Oman, Iran and Saudi Arabia, can be done based on the following characters: *Thraustocolus* (s. str.) *rugosus* Kaszab, 1979 from Oman, Saudi Arabia and the United Arab Emirates: Head and pronotum evenly punctured, sides of pronotum wrinkled punctured. Elytra sparse and finely rasp-like granulate. 7–7.8 mm.

Thraustocolus (s. str.) *arabicus* Kaszab, 1979 from Saudi Arabia: Head and pronotum evenly roughly punctured, pronotum punctured on the sides rasp-like. Elytra granulate. 6–10 mm. In contrast to these two species, the new species and its subspecies have an evenly roundly punctured pronotum, finer than head. Elytra not grained.

Thraustocolus (s. str.) *catomoides* Kaszab, 1981 from Saudi Arabia: 3rd antennal segment 1.9 times as long as the 2nd, disc of the pronotum very sparsely punctured, the base dense, laterally vanishing and rasp-like densely granular-punctate. 4.3 mm. In the new species and subspecies

Figure 2. *Thraustcolus clypealis* sp. nov. *minor* ssp. nov. dorsal view.

the 3rd antennal segment is 2.8 times longer than the 2nd. Pronotum even with round punctures.

Thraustocolus (s. str.) *propheta* Koch, 1941 from Saudi Arabia: eyes large, completely detached, strong from the contours of genae, only slightly protruding from those of the temples, significantly projecting outwards above the level of genae. 3rd antennal segment only almost twice as long as the 2nd segment. 5–6 mm. In the new species and subspecies the eyes are flat and the 3rd antennal segment is 2.8 times as long as the 2rd.

Thraustocolus (*Prothraustocola*) *pitcheri* Johnson, 1989 from Saudi Arabia: eyes bulbous, protruding, the basal margin of the pronotum is briefly interrupted in the middle in ♂. 8.5 mm. In the new species and subspecies the eyes are flat and the base of the pronotum is clearly marginated throughout.

Thraustocolus (*Prothraustocola*) *hormozganus* Grimm & Merkl, 2018 from Iran: punctures on pronotum rougher than on head, many punctures distinctly elongate. Prosternal apophysis between procoxae does not protrude backwards. Basal part of aedeagus is significantly shorter than the apical. 7.1–10.5 mm. In the new species and subspecies the pronotum is evenly provided with round punctures. Prosternal apophysis protrudes behind procoxae as a tip. Basal and apical sections of the aedeagus are about the same length.

Thraustocolus (*P.*) *belutschistanica* Kaszab, 1957 from Iran, Baluchistan: head dorsally finely and very sparsely punctured; pronotum almost cylindrical, lateral margin anteriorly completely extinguished. Prosternal apophysis not protruding beyond procoxae. 8.5 mm. In the new species and subspecies the head is dorsaly densely and clearly punctured. Pronotum clearly rounded laterally and completely marginated. Prosternal apophysis protrudes as a tip behind procoxae.

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References

Grimm R, Merkl O (2018) A new species of *Thraustocolus* Kraatz from Iran (Insecta: Coleoptera: Tenebrionidae: Tentyriini). Vernate 37: 317–319.

Iwan D, Löbl I [Eds] (2020) Catalogue of Palaearctic Coleoptera. Vol. 5. Revised and Updated Second Edition. Tenebrionoidea; Brill: Leiden, The Netherlands; Boston, MA, USA, 945 pp. https://doi.org/10.1163/9789004434998

Johnson C (1989) Tenebrionidae (Coleoptera) collected in the Eastern Province of Saudi Arabia. Fauna of Saudi Arabia: 123–133.

Kaszab Z (1957) Zehn neue Tenebrioniden aus Asien (Coleoptera). Annales Historico-Naturales Musei Nationalis Hungarici (S.N.) 8: 289–299.

Kaszab Z (1979) Insects of Saudi Arabia. Coleoptera: Fam. Tenebrionidae. Fauna of Saudi Arabia 1: 257–288.

Koch C (1941) Phylogenetische, biogeographische und systematische Studien über ungeflügelte Tenebrioniden (Col. Tenebr.). III. – Mitteilungen der Münchener Entomologischen Gesellschaft 31: 252–314[, pls 12–13].

Löbl I, Smetana A (2008) Catalogue of Palaearctic Coleoptera, Volume 5. Tenebrionoidae. Apollo Books, Stenstrup, 105–352.